

## SEQUENCE LISTING

<110> Richards, Nigel Gordon John  
Chang, Christopher Harry  
Peck, Ammon B.

<120> Polunucleotides Encoding Oxalate Decarboxylase from Aspergillus  
Niger and Methods of Use

<130> UF-314XC1

<150> US 60/404,892

<151> 2002-08-20

<160> 9

<170> PatentIn version 3.2

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<212> DNA

<213> Aspergillus niger

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gaacatgcgg tggagctttg ctgactccca cattcgcatt gaggttaagcc cttcgagagt 300  
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<213> Aspergillus niger

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														30	
20								25							

Val	Asp	Ala	Ile	Gly	Glu	Gly	His	Glu	Pro	Leu	Pro	Trp	Arg	Met	Gly
														45	
35							40								

Asp	Gly	Ala	Thr	Ile	Met	Gly	Pro	Arg	Asn	Lys	Asp	Arg	Glu	Arg	Gln
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Asn	Pro	Asp	Met	Leu	Arg	Pro	Pro	Ser	Thr	Asp	His	Gly	Asn	Met	Pro
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Asn	Met	Arg	Trp	Ser	Phe	Ala	Asp	Ser	His	Ile	Arg	Ile	Glu	Glu	Gly
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Gly	Trp	Thr	Arg	Gln	Thr	Thr	Val	Arg	Glu	Leu	Pro	Thr	Ser	Arg	Glu
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Leu	Ala	Gly	Val	Asn	Met	Arg	Leu	Asp	Glu	Gly	Val	Ile	Arg	Glu	Leu
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His	Trp	His	Arg	Glu	Ala	Glu	Trp	Ala	Tyr	Val	Leu	Ala	Gly	Arg	Val
130							135							140	

Arg	Val	Thr	Gly	Leu	Asp	Leu	Glu	Gly	Ser	Phe	Ile	Asp	Asp	Leu	
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Glu	Glu	Gly	Asp	Leu	Trp	Tyr	Phe	Pro	Ser	Gly	His	Pro	His	Ser	Leu
165							170							175	

Gln	Gly	Leu	Ser	Pro	Asn	Gly	Thr	Glu	Phe	Leu	Ile	Phe	Asp	Asp

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His Thr Pro Lys Ser Val Leu Ala Gly Asn Phe Arg Met Arg Pro Gln		
210	215	220
Thr Phe Lys Asn Ile Pro Pro Ser Glu Lys Tyr Ile Phe Gln Gly Ser		
225	230	235
Val Pro Asp Ser Ile Pro Lys Glu Leu Pro Arg Asn Phe Lys Ala Ser		
245	250	255
Lys Gln Arg Phe Thr His Lys Met Leu Ala Gln Glu Pro Glu His Thr		
260	265	270
Ser Gly Gly Glu Val Arg Ile Thr Asp Ser Ser Asn Phe Pro Ile Ser		
275	280	285
Lys Thr Val Ala Ala Ala His Leu Thr Ile Asn Pro Gly Ala Ile Arg		
290	295	300
Glu Met His Trp His Pro Asn Ala Asp Glu Trp Ser Tyr Phe Lys Arg		
305	310	315
320		
Gly Arg Ala Arg Val Thr Ile Phe Ala Ala Glu Gly Asn Ala Arg Thr		
325	330	335
Phe Asp Tyr Val Ala Gly Asp Val Gly Ile Val Pro Arg Asn Met Gly		
340	345	350
His Phe Ile Glu Asn Leu Ser Asp Asp Glu Glu Val Glu Val Leu Glu		
355	360	365
Ile Phe Arg Ala Asp Arg Phe Arg Asp Phe Ser Leu Phe Gln Trp Met		
370	375	380
Gly Glu Thr Pro Gln Arg Met Val Ala Glu His Val Phe Lys Asp Asp		
385	390	395
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Pro Asp Ala Ala Arg Glu Phe Leu Lys Ser Val Glu Ser Gly Glu Lys		
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Asp Pro Ile Arg Ser Pro Ser Glu		
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 35 40 45  
 Gln Asn Pro Asp Met Leu Arg Pro Pro Ser Thr Asp His Gly Asn Met  
 50 55 60  
 Pro Asn Met Arg Trp Ser Phe Ala Asp Ser His Ile Arg Ile Glu Glu  
 65 70 75 80  
 Gly Gly Trp Thr Arg Gln Thr Thr Val Arg Glu Leu Pro Thr Ser Arg  
 85 90 95  
 Glu Leu Ala Gly Val Asn Met Arg Leu Asp Glu Gly Val Ile Arg Glu  
 100 105 110  
 Leu His Trp His Arg Glu Ala Glu Trp Ala Tyr Val Leu Ala Gly Arg  
 115 120 125  
 Val Arg Val Thr Gly Leu Asp Leu Glu Gly Ser Phe Ile Asp Asp  
 130 135 140  
 Leu Glu Glu Gly Asp Leu Trp Tyr Phe Pro Ser Gly His Pro His Ser  
 145 150 155 160  
 Leu Gln Gly Leu Ser Pro Asn Gly Thr Glu Phe Leu Leu Ile Phe Asp  
 165 170 175  
 Asp Gly Asn Phe Ser Glu Glu Ser Thr Phe Leu Leu Thr Asp Trp Ile  
 180 185 190  
 Ala His Thr Pro Lys Ser Val Leu Ala Gly Asn Phe Arg Met Arg Pro  
 195 200 205  
 Gln Thr Phe Lys Asn Ile Pro Pro Ser Glu Lys Tyr Ile Phe Gln Gly  
 210 215 220  
 Ser Val Pro Asp Ser Ile Pro Lys Glu Leu Pro Arg Asn Phe Lys Ala  
 225 230 235 240  
 Ser Lys Gln Arg Phe Thr His Lys Met Leu Ala Gln Glu Pro Glu His  
 245 250 255  
 Thr Ser Gly Gly Glu Val Arg Ile Thr Asp Ser Ser Asn Phe Pro Ile  
 260 265 270  
 Ser Lys Thr Val Ala Ala Ala His Leu Thr Ile Asn Pro Gly Ala Ile  
 275 280 285  
 Arg Glu Met His Trp His Pro Asn Ala Asp Glu Trp Ser Tyr Phe Lys

290	295	300
Arg Gly Arg Ala Arg Val Thr Ile Phe Ala Ala Glu Gly Asn Ala Arg		
305	310	315
320		
Thr Phe Asp Tyr Val Ala Gly Asp Val Gly Ile Val Pro Arg Asn Met		
325	330	335
Gly His Phe Ile Glu Asn Leu Ser Asp Asp Glu Glu Val Glu Val Leu		
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Glu Ile Phe Arg Ala Asp Arg Phe Arg Asp Phe Ser Leu Phe Gln Trp		
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Met Gly Glu Thr Pro Gln Arg Met Val Ala Glu His Val Phe Lys Asp		
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380		
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385	390	395
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Lys Asp Pro Ile Arg Ser Pro Ser Glu		
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<210> 8  
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<212> PRT  
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<220>  
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Aspergillus niger

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<211> 385  
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20               25                   30

Asp Met Leu Val Pro Pro Glu Thr Asp His Gly Thr Val Ser Asn Met  
35               40                   45

Lys Phe Ser Phe Ser Asp Thr His Asn Arg Leu Glu Lys Gly Gly Tyr  
50               55                   60

Ala Arg Glu Val Thr Val Arg Glu Leu Pro Ile Ser Glu Asn Leu Ala  
65               70                   75                   80

Ser Val Asn Met Arg Leu Lys Pro Gly Ala Ile Arg Glu Leu His Trp  
85               90                   95

His Lys Glu Ala Glu Trp Ala Tyr Met Ile Tyr Gly Ser Ala Arg Val  
100              105                   110

Thr Ile Val Asp Glu Lys Gly Arg Ser Phe Ile Asp Asp Val Gly Glu  
115              120                   125

Gly Asp Leu Trp Tyr Phe Pro Ser Gly Leu Pro His Ser Ile Gln Ala  
130              135                   140

Leu Glu Glu Gly Ala Glu Phe Leu Leu Val Phe Asp Asp Gly Ser Phe  
145              150                   155                   160

Ser Glu Asn Ser Thr Phe Gln Leu Thr Asp Trp Leu Ala His Thr Pro  
165 170 175

Lys Glu Val Ile Ala Ala Asn Phe Gly Val Thr Lys Glu Glu Ile Ser  
180 185 190

Asn Leu Pro Gly Lys Glu Lys Tyr Ile Phe Glu Asn Gln Leu Pro Gly  
195 200 205

Ser Leu Lys Asp Asp Ile Val Glu Gly Pro Asn Gly Glu Val Pro Tyr  
210 215 220

Pro Phe Thr Tyr Arg Leu Leu Glu Gln Glu Pro Ile Glu Ser Glu Gly  
225 230 235 240

Gly Lys Val Tyr Ile Ala Asp Ser Thr Asn Phe Lys Val Ser Lys Thr  
245 250 255

Ile Ala Ser Ala Leu Val Thr Val Glu Pro Gly Ala Met Arg Glu Leu  
260 265 270

His Trp His Pro Asn Thr His Glu Trp Gln Tyr Tyr Ile Ser Gly Lys  
275 280 285

Ala Arg Met Thr Val Phe Ala Ser Asp Gly His Ala Arg Thr Phe Asn  
290 295 300

Tyr Gln Ala Gly Asp Val Gly Tyr Val Pro Phe Ala Met Gly His Tyr  
305 310 315 320

Val Glu Asn Ile Gly Asp Glu Pro Leu Val Phe Leu Glu Ile Phe Lys  
325 330 335

Asp Asp His Tyr Ala Asp Val Ser Leu Asn Gln Trp Leu Ala Met Leu  
340 345 350

Pro Glu Thr Phe Val Gln Ala His Leu Asp Leu Gly Lys Asp Phe Thr  
355 360 365

Asp Val Leu Ser Lys Glu Lys His Pro Val Val Lys Lys Lys Cys Ser  
370 375 380

Lys  
385